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10 December 1984

Worldwide Report

TELECOMMUNICATIONS POLICY,
RESEARCH AND DEVELOPMENT



FOREIGN BROADCAST INFORMATION SERVICE

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10 December 1984

WORLDWIDE REPORT
TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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TELECOMMUNICATIONS CONTRACT TO WEST GERMANS

Kuala Lumpur BUSINESS TIMES in English 22 Oct 84 p 24

[Article by Khalid Jaafar]

[Text]

STANDARD Elektrik Lorenz AG (SEL), ITT's West Germany subsidiary, has been awarded the \$450 million Telecommunications Department contract to install the microwave network that will form the backbone of Malaysia's long-link telecommunications system.

The five-year turnkey package is the final phase in Telecoms' masterplan to extend and upgrade the domestic and overseas telephone services so as to be at par with international standards.

The contract was signed recently between Director General of Telecoms Daud Isahak and SEL's representative Hans-Joachim von Ludwig.

Under the terms of the contract, SEL will install the nationwide network, comprising analogue and digital radio relay systems, in Peninsular Malaysia, Sabah and Sarawak.

The contract is primarily for the supply, installation and commissioning of the transmission equipment, as well as for civil works, the company said in a statement.

The company will install radio relay transmitter/receivers, optical fibre systems, towers, power stations, and build access roads and station buildings. SEL will carry out the contract in cooperation with local sub-contractors.

"The contract demands the highest in telecommunications technology and SEL, being one of the world's leader, is honoured to be associated with the project," said Mr von Ludwig.

When work is in full swing, about 400 people are expected to gain employment. Under a continuous training scheme, Telecoms engineers and technicians will be sent to West Germany for training under SEL.

When the modern microwave network is installed, it will make available the full potential of the investments made by Telecoms in the last few years.

SEL's first major project in Malaysia was the installation of a radio link between Malaysia and Thailand in 1972. It now has a sizeable portion of the world transmission market.

CSO: 5500/4308

GROUND STATION FOR SATELLITE COMMUNICATIONS

Hangzhou ZHEJIANG RIBAO in Chinese 12 Jun 84 p 4

/Article by Chen Fumin /7115 4395 3046/: "Ground Station--Excellent Support in Satellite Communications"/

/Text/ The first communications satellite launched by China, after entering its stable orbit on 16 April, has already been in operation. Today people in Urumqi can receive the same program shown on the central TV station. Friends thousands of miles apart may talk face to face via satellite. However, do you know that ground stations are also contributing to this miracle of satellite communications?

Communications satellites are high up in the sky. The radio signals received on the ground are too weak to be directly used in communications. In order to clearly listen to signals from a satellite, it is necessary to have a sensitive "ear" and a loud "voice." The ear is the reception device which receives and amplifies weak signals from satellites and converts them to voices by using a carrier wave terminal. The high frequency voice is a transmitter which transmits electrical voice signals to a satellite through an antenna. This ground installation consisting of antennas, transmitters, receivers, communications controllers and power supplies is a ground satellite communications station.

A communications satellite is a bridge capable of handling thousands of voice frequency lines. It is able to allow thousands of people to talk simultaneously. A frequency converter is used to increase the voice frequencies of the users by one notch every 4000Hz to form a group of signals to be transmitted by microwave. Just as a bridge across the Chang Jiang, low frequencies travel on the lower level just as trains, while high frequencies pass through on the upper level like cars. They do not mutually interfere with each other to realize multiple channel dialogues simultaneously. What kind of equipment is used on both ends of this communications bridge to separate the multi-channel signals? It is the carrier wave terminal in a ground station.

One component of the carrier wave terminal is a filter. It acts as an automatic "gate" which only opens to electric signals of a specific

frequency and shuts off other frequencies. Thus, each telephone signal can be separated. However, it is still not enough because voice frequencies have been increased. The carrier wave terminal is equipped with another frequency converter to change the telephone signals back to normal to allow people to talk conveniently.

Hence, a carrier wave terminal is just like an electric "ramp." The higher its capacity is, the more telephone lines the communications satellite can handle. The Hangzhou Communications Equipment Plant developed an expansion project for satellite communications for the Beijing Ground Station. It was capable of adding 600 lines to the original capacity. After the recent satellite launch, this station also established a "bridge" for relaying telephone and television between Beijing and Xinjiang.

A ground station is also a retransmitting station for satellite television on broadcasting. Because a satellite can only cover one-third of the earth's surface, in order to watch a television program on the other side of the earth--America, the ground station there must first transmit it to the satellite over the Atlantic. Then, it will be received and retransmitted by a ground station in Europe to the satellite over the Indian Ocean to be received by the Beijing ground station. It is subsequently retransmitted to the central station for broadcasting nationwide.

In addition to ground stations in Beijing, Shanghai and Nanjing, ground stations in Shijiazhuang, Chengdu, Urumqi, Kunming and Hohhot were also tested in satellite communications. They have contributed to the establishment of a domestic satellite communications network in China.

12553

CSO: 5500/4143

NEW TELEPHONE EXCHANGE IN HANGZHOU

Hangzhou ZHEJIANG RIBAO in Chinese 12 Jun 84 p 4

/Article by Wang Yubo /3769 1342 3134/: "People in Hangzhou Will Be Better Informed"/

/Text/ On the east side of the Zhejiang Exhibition Hall Plaza, there is an eight-story building--the Hangzhou Long Distance Communications Building. Approved by concerned provincial departments, an imported "computer controlled telephone exchange"--a piece of advanced multi-function computer communications equipment--will be installed in this building.

The telephone, as a complete communications system, includes receivers, transmitting lines and telephone exchanges. A telephone exchange is a device to concentrate the lines and make connections for the users. It is the heart of the telephone system. Since 1878, the telephone exchange has experienced three developmental stages: the earliest manual exchange, automated mechanical exchange and fully automated program controlled exchange introduced since the seventies. The United States, Japan and western European countries are widely using these program controlled telephone exchanges.

A program controlled telephone exchange employs a computer to control the telephone connection process. It is the so-called stored program control. The operators store "instructions" in the computer in advance and the computer execute such orders to direct the exchange. Thus, by changing the program, one can improve and add services provided by the exchange. Hence, this automatic telephone can offer many new features such as: Hotline: A frequently dialed number can be connected within 5 seconds by simply picking up the receiver without dialing. However, the hotline can only be installed with a specific party. If dialing begins within 5 seconds, this function is automatically eliminated.

Speed calling: One only has to dial 1 or 2 digits instead of a 5 or 6 or more digit number (telephone number will be 10 digit long after long distance telephone is automated). Each telephone will have 10 (1 digit)

or 100 (2 digits) codes. Numbers corresponding to various codes can also be changed at will. For example, if 21 originally represents 372100 and now we want 21 to correspond to 374181, it can be accomplished by dialing a specific number.

Call Forwarding: If you are going somewhere, you can dial a specific number followed by the telephone number where you intend to go. Incoming calls will be automatically transferred to where you are going. As you return, the function can be removed by dialing another code.

Conference call: When you are talking on the line and wish to consult with a third party, there is no need to terminate the conversation. All you have to do is to press and release the receiver button and dial the third person's number to proceed with a three-way conversation. The same method can put a maximum of six persons on the line simultaneously.

Automatic dialing: If the line is busy when you call a number, all you have to do is to dial a specific code and hang up. After the line is cleared, the telephone exchange will automatically put your call through. If several users are waiting simultaneously, the calls will be connected in sequence.

Automatic Reminder: If you are going out, you can call the control desk to remind you. At a specific time, the telephone will ring automatically. When you pick up the receiver, you will hear "How are you? It is time for you to go." If you do not pick it up, the telephone will ring six times. After five minutes, it will ring for six times again. After repeating three times, it will no longer ring. It will be recorded on a printer to prove that the telephone exchange has done its job.

In addition, there are more than 100 other services, including call answering, call holding, message taking, automatic billing, etc.

The program controlled telephone exchange is fast, compact and fully automated in maintenance and control. It is far superior than any other available telephone exchanges. The noise is also extremely low in a program controlled telephone exchange.

In addition to program controlled telephone exchanges already imported by Fuzhou and Guangzhou, they are manufactured in quantity in Shanghai under contract with Belgium. During the "Seventh 5-Year Plan" period, Hangzhou Bureau of Telecommunications and Post also plans to build several telephone exchanges capable of handling 10,000 units each at Qingnian Road and Wangjiangmen. By then, people in Hangzhou can enjoy the computer fantasy and be well informed.

12553

CSO: 5500/4143

PROGRESS IN OPTICAL COMMUNICATIONS DISCUSSED

Beijing NONGCUN DIANXIN JISHU /TECHNOLOGY OF RURAL COMMUNICATIONS/
in Chinese No 5, 1984 p 21

/Excerpt/ Introduction to Domestic Progress

The research on optical communications in China begun in 1964 with atmospheric laser communications. Later, devices were developed to conduct experiments to transmit video pictures. An ambient temperature continuously operating double heterojunction GaAs laser was developed in 1975. In 1976, a 0.85 μm wavelength multimode optical fiber with a loss of 10-20dB/km was fabricated. Then, short wavelength 8 megahertz (120 telephone lines) experimental optical fiber lines were established in Shanghai, Beijing, Wuhan and Nanjing as relay system in local communications. Among them, the Wuhan system is the longest (including two optical retransmitters). These four systems are included in the operating networks. A 34 megahertz short wavelength optical fiber system (480 telephone lines) was subsequently developed. In addition, the Ministry of Electronics Industry and Ministry of Railways are also testing and using optical fiber systems. Most of the Chinese optical fiber communications systems operate at short wavelengths. Only a few experimental 34 megahertz and 140 megahertz systems are working at long wavelengths. After the Third Plenum, research and development of optical fiber progressed very rapidly. A short wavelength gradient optical fiber with a loss of 3-5 dB/km was prepared in 1979. The development of long wavelength optical fibers has vigorously been under way since 1981. Some units can already reduce the optical fiber loss to 1 dB/km and 0.4-0.5 dB/km in some cases (1.2, 1.3 and 1.55 μm in wavelength). The concerned departments also worked extensively on the study of monomode optical fibers. The characteristics of the monomode optical fiber developed around 1982 are: loss less than 2 dB/km at 1.3 μm , less than 1 dB/km at 1.5 μm . China will make faster progress in the research and exploitation of monomode optical fibers. The development of long wavelength optoelectric devices will also be accelerated to satisfy the needs in long range optical fiber communications.

ZHEJIANG SPEEDS POSTAL, TELECOMMUNICATION WORK

OW231711 Beijing XINHUA in English 1640 GMT 23 Oct 84

[Text] Hangzhou, 23 October (XINHUA)--Work has begun on a postal building in Hangzhou, capital of Zhenjiang Province, and a microwave circuit to cope with growing demands on posts and telecommunications in Zhejiang Province.

Bao Rongming, deputy director of the provincial Bureau of Posts and Telecommunications, said the building, requiring more than 10 million yuan, would be the province's largest. It will consist of a postal handling center and a postal conveying building, and the whole process will be computerized. The building is scheduled to go into service in 1990.

The 153-kilometer microwave circuit will link the lake-city of Hangzhou, a tourist attraction, with Ningbo, one of the 14 coastal cities open wider to the outside world. It will have three 960-channel waveguides for broadcasting, television relay and telecommunications. The project requires 5.6 million yuan and is to go into operation in 1986.

Bao Rongming said Zhenjiang's present posts and telecommunications were backward. To upgrade its telecommunications system, Zhejiang has imported an advanced telephone system with stored program-controlled digital switching. It will be installed in Hangzhou's telecommunications building still under construction. Equipped with high-capacity cable carriers and microwave circuits, the building will open in 1986.

About one-fourth of a 766-kilometer coaxial cable between Hangzhou and Fuzhou, capital of Fujian Province, has been laid since December 1983. The 45-million-yuan project, with a capacity of about 3,000 telephone channels, is to be completed in 1986. The cable passing through 22 cities and counties will facilitate telecommunications between the two neighboring provinces.

Zhenjiang plans to install 200,000 more telephone lines by 1990.

These projects when completed, will greatly improve Zhejiang's postal and telecommunication services, the deputy director said.

010: 5500/4144

PEOPLE'S REPUBLIC OF CHINA

CHINA DAILY ON TELECOMMUNICATIONS INVESTMENT

HK080807 Beijing CHINA DAILY in English 8 Nov 84 p 1

[By staff reporter]

[Excerpts] Advanced direct-dialing telephone systems are to be installed in all coastal cities open to foreign investment by 1986.

It will go into operation in Xiamen--also in Fujian--by the end of this year; in 11 cities including Shanghai, Guangzhou and Shenzhen in 1985; and in six other cities including Zhuhai and Beihai in 1986.

Altogether, more than 500,000 program-controlled digital telephones are to be installed in Beijing, Shanghai, Tianjin, most provincial capitals and other coastal cities by 1990.

People in Tianjin, Shanghai, Fuzhou and Zhuhai can now dial directly to cities throughout the country and the world. This facility is expected to spread to Guangzhou, Xiamen and Shenzhen within this year, and to Dalian, Qinghuangdao, Yantai, and Qingdao in 1986.

Speaking at a reception marking the opening of China Comm 84, a communications equipment exhibition in Beijing, Yang Taifang, minister of post and telecommunications said yesterday that it was imperative for China to improve its post and telecommunications service.

He said the first stage of the development would be to increase the number of telephones from 5 million at present to more than 10 million by 1990.

China would also install optical fibre telecommunications links, a number of microwave telecommunications lines and 21 ground satellite stations between 1986 and 1990.

To help pay for the modernization, Yang said, the ministry would use foreign investment to bolster government funds, and money raised by post and telecommunications departments.

Also, we will extensively import foreign advanced communications technology and equipment to speed up the development of our communication industry and construction of the communications facilities," the minister added.

PEOPLE'S REPUBLIC OF CHINA

PRC TO UPGRADE TELECOMMUNICATIONS NETWORK

OW131241 Beijing XINHUA in English 1200 GMT 13 Nov 84

[Text] Beijing, 13 November (XINHUA)--China will import advanced foreign telecommunications technology and equipment to upgrade its present telecommunications network, according to Yang Taifang, minister of posts and telecommunications.

Speaking to foreign guests who are taking part in an international exhibition of telecommunications equipment, computers and electronic devices and appliances, Yang said that by the year 2000 China will have 33,600,000 telephones, up from the present 5,070,000, China's telecommunications network will be fully automated, and there will also be services for high-speed facsimile and picture transmission.

The pace of the present telecommunications development is lagging far behind that of the development of the economy and social advancement as a whole, he noted. But, he said the ministry has decided to equip all the 14 open port cities and the special economic zones with advanced telephone installations--program-controlled digital switching systems--by the end of 1986.

To reach its goal, the ministry will utilize foreign investment in addition to state investment.

Up to the present, the ministry has carried out fruitful cooperation with companies in Belgium, Japan, the United States, the Netherlands, Sweden, Italy and Canada. Negotiations are under way between the Chinese Ministry of Posts and Telecommunications, and other foreign companies on importing equipment and setting up advanced posts and telecommunications installation.

CSO: 5500/4160

PRC TO IMPORT TWO SATELLITES TO BOOST BROADCASTING

HK140453 Beijing CHINA DAILY in English 14 Nov 84 p 1

[By staff reporter Chen Guangfeng]

[Text] China's TV coverage and radio reception is to receive a massive boost with the import of two broadcast satellites and other up-to-date equipment.

The Ministry of Radio and Television told CHINA DAILY yesterday that the program should allow TV coverage to spread to the whole of China.

The project, proposed by the ministry and approved by the State Council, will also include importing tracking equipment, command stations and equipment for sending signals to the satellites.

A large number of ground stations for capturing and relaying signals from the satellites will be set up all over the country with Chinese equipment.

"We have already informed companies in France, Federal Republic of Germany and the United States of what we need," said Zhang Zhijian, the ministry's deputy chief engineer. "If everything goes smoothly, the two satellites will be launched at the end of 1987 or beginning of 1988. By that time, a number of ground stations and relay stations will be ready."

Zhang said China decided to import satellites mainly because the country cannot afford to lose time by making them.

"We want to meet the urgent demand of our people to watch TV and listen to the radio," he said.

China launched a communications satellite early this year. And according to reliable resources, preparations are under way for making satellites capable of broadcasting TV programs. But the first will not be launched for quite some time.

Other efforts are also being made to improve TV reception. In Beijing, for example, the ministry will put up a 380-meter transmitting tower to increase the area coverage, Zhang revealed.

China's TV broadcasting has developed considerably since the China Central Television Station was founded in 1958. TV stations have now been set up in all province-level capitals, and in a number of medium-size cities, such as Qingdao in Shandong Province, Tangshan in Hebei Province, and Anshan and Fushun in Liaoning Province.

But, because of China's size and its mountains, only 50 to 60 percent of the country's territory can receive CCTV. This is not only inconvenient, it also hinders the country's modernization drive, which needs a vast supply of educated people.

CCTV has carried educational programs since 1960, and the ministry set up the Central Radio and Television University in 1979 for those who cannot get into schools and colleges.

More than 350,000 students are now majoring in more than 70 courses offered by the Central Radio and Television University and the number is expected to increase to 2 million by 1990. Within this decade, 900,000 students will graduate and another 750,000 will receive single-course qualification certificates.

"As part of this effort CCTV will lengthen its broadcast time and improve the quality of programs," Zhang said.

CSO: 5500/4160

BRIEFS

OPTICAL COMMUNICATION SYSTEM--Tianjin, 25 September (XINHUA)--An optical communications system, providing 480 telephone channels on a single fiber, has been approved for regular operation by more than 100 specialists from all over China. The 7-kilometer system, including terminals, optical fiber cable and laser aids, was designed by research institutes under the Ministry of the Electronics Industry, beginning from 1982. Since it went into trial operation in December last year, the system has demonstrated clarity without interference, number faults or interruptions despite high ground water levels and temperature extremes. In the past few years China has built experimental optical fiber communication lines in Beijing, Shanghai, Wuhan and other cities. [Text] [Beijing XINHUA in English 0045 GMT 25 Sep 84 OW]

COOPERATION AGREEMENT--NHK and the Chinese Ministry of Radio and Television signed in Beijing today an agreement to further promote cooperation in the broadcasting field between Japan and China. At the signing ceremony held at the CPC guest hall, NHK President Kawahara and Chinese Minister of Radio and Television Wu Lengxi signed the agreement and exchanged documents. According to the agreement, NHK and the Chinese Ministry of Radio and Television will cooperate in news collection and technology exchange. Actual plans for programs and technology exchange will be worked out at cooperative committee sessions to be held alternately in Tokyo and Beijing once a year. Furthermore, the agreement states that NHK and the Chinese Ministry of Radio and Television will exchange, free of charge, news material within 48 hours after release and that priority will be given to cooperation in satellite-relayed broadcasts between the two countries. Thus, arrangements have been made for further cooperation between NHK and the Chinese broadcasting agencies. [Text] [Tokyo NHK Television Network in Japanese 0310 GMT 16 Oct 84]

CSO: 5500/4145

NORTHERN TELECOM INVESTING IN ADVANCED CHIP TECHNOLOGY

Toronto THE GLOBE AND MAIL in English 26 Sep 84 p B1

[Article by David Stewart-Patterson]

[Text]

OTTAWA — Northern Telecom Ltd. of Mississauga, Ont., says it will spend \$80-million in an effort to develop the next generation of semiconductors for the telecommunications industry.

Half of the money will be spent on a 105,000-square-foot addition to its semiconductor manufacturing plant in Nepean, Ont., a suburb of Ottawa. The other \$40-million will be spent on the equipment needed to develop the new process and use it to make the new chips.

At a total cost of almost \$800 a square foot, the addition "is probably the most expensive building in Ottawa," said Charles Millar, president of Northern Telecom Electronics Ltd.

The project is expected to add only 200 employees over the next three years, which makes it an expensive piece of job creation as well. But "those are 200 very good jobs," said Edmund Fitzgerald, Nortel presi-

dent.

The company's research and development work may be capital-intensive, but it is essential to maintain Nortel's future growth. Mr. Millar said a company study two years ago found that each job in the semiconductor division created another 10 elsewhere in the company.

Mr. Fitzgerald said Nortel expects to increase its payroll by another 10,000 jobs to 55,000 world-wide by 1988.

Nortel hopes this investment will result in new semiconductors whose circuit elements are only one micron apart. A micron is one-millionth of a metre or about one-fiftieth the width of a human hair.

"No manufacturer has yet achieved the ability to produce commercially viable semiconductors to a geometry of one micron," Mr. Fitzgerald said. "But it is a goal many are pursuing."

When developed, the new process would allow the company to pack more than 200,000

transistors on to a chip one-quarter of an inch square, compared with about 50,000 that can be mounted on chips of similar size using existing CMOS (complementary metal oxide semiconductor) technology.

Construction of the new building is to begin this week. The walls and flooring should be finished by December, 1985, with vibration-free "clean rooms" for fabricating silicon wafers and electrical support systems to be installed by May, 1986.

The project should be finished by January, 1987. In addition to the laboratory space, the new plant will house business systems planners and developers responsible for meshing the new technology with Nortel's products.

The company's two semiconductor manufacturing plants, the one at Nepean and the other in San Diego, Calif., produce almost two-thirds of the 18 million custom semiconductors Nortel uses each year in its telecommunications products.

CSO: 5520/17

REGULAR TELECOMMUNICATIONS CONSULTATIONS WITH JAPAN DECIDED

Vancouver THE WEEKEND SUN in English 6 Oct 84 p E7

[Text]

TOKYO (CP) — Canada and Japan have signed an agreement in principle to begin regular bilateral telecommunications consultations, the Canadian embassy announced Friday.

Ken Lewis, of the embassy's economic section, said the Canadian proposal for the official-level talks was agreed to by Japanese Post and Telecommunication Minister Keiwa Okuda and Ambassador Barry Steers at a meeting Friday.

Okuda's ministry is becoming one of the more influential ones in Japan as the country moves away from reliance on heavy industry and takes on larger industrial policy and foreign roles.

The consultations will likely take place at the deputy minister or assistant deputy minister level.

Lewis said the consultations, similar to ones agreed to recently by

Okuda with West Germany, the United States and Britain, should allow both sides to examine policy questions relating to telecommunication deregulation, standards and procedures and research and development.

The countries have a multi-million-dollar trade in telecommunications equipment and related products that is expected to expand rapidly in coming years.

The Japanese are hoping to learn more about Canadian satellite expertise, mobile broadcast and receiving technology and several policy areas. The Canadians hope to learn about similar Japanese advancements as well as general policy matters, Lewis said.

The first meeting of the group, which is expected to involve business interests eventually, is hoped for before the end of this year.

CSO: 5520/17

CRTC POLICY ON PAY-TV COMPETITION ANNOUNCED

Toronto THE GLOBE AND MAIL in English 16 Oct 84 p B1

[Article by Dan Westell]

[Text]

The Canadian Radio-Television and Telecommunications Commission has set up an explicit policy target for the 20 or so specialized pay-television services that it licenced cable companies to begin selling last month.

One reason behind the CRTC's move to allow the entry of U.S. specialty services was to give cable companies, the federal Government's choice as a main delivery system for Canadian material, a means of better competing with U.S. imports, available to viewers through a variety of new technologies.

Now the CRTC has provided some examples of locations where it expects the specialty services to enable cable companies to compete, and has given some companies that were providing unauthorized services one-year licence renewals so it can track their performance.

Viewers were buying their own "television receive-only" (TVRO) equipment, better known as satellite dishes, tuning in to U.S. satellites and watching U.S. shows, including unscrambled pay-TV networks such as Home Box Office.

So when the commission licenced cable companies to import and sell 16 U.S. specialty services, ranging from Country Music Television to the Weather Channel, it hoped the new offerings would keep Canadian viewers tuned to Canadian cable systems.

Two domestic services — the Muchmusic rock video channel owned by CHUM Ltd. of Toronto and the Sports Network channel run by John Labatt Ltd. of London, Ont. — rounded out the specialty offerings.

But before the CRTC made this decision, effective Sept. 1, many cable

systems were already fighting fire with fire. In places such as Sayward, Hope, Campbell River, Ucluelet and Whistler, all in British Columbia, the local cable company dealt with the TVRO threat by aiming its own dish at U.S. satellites and re-transmitting the programs.

In a recent decision, the CRTC renewed the licences for the systems in the five communities for one year, compared with the usual five-year renewal, citing its "grave concern" with the "unauthorized carriage of these U.S. satellite signals."

The companies had argued they needed the signals to survive. When told to stop distributing the signals, Hope Cable Television Ltd. replied that it would continue to carry them because it was facing "a direct threat by several commercial subscribers to acquire their own service if we, as their

source of TV, did not supply more."

Whistler Cable Television Ltd. was even blunter. Dropping the unauthorized signals would bring about "the immediate demise of this undertaking."

In all five cases, the CRTC had the same reply. With the licencing of the specialty channels, "the commission considers that the range of authorized services . . . is sufficient to enable it (the cable company) to offer an attractive package of services to subscribers at reasonable cost."

But there are questions about the cost. The capital costs of small town and rural cable systems are higher per subscriber because the population density is lower. But once a consumer has made the capital commitment and bought a dish, he has access to "the most popular U.S. services for free," a cable industry source said.

BRIEFS

TELESAT TO SELL SPARE SATELLITE--OTTAWA--Telesat Canada has enlisted Paine Webber Inc. of New York to sell an Anik C communications satellite for which it has no use. The country's domestic satellite operator said it is asking \$65-million (U.S.)--more than \$80-million (Canadian)--as an "initial minimum asking price" and wants the investment banker to complete the deal by January. Telesat planned for three Anik C satellites more than seven years ago and anticipated they would be fully used by pay-TV, long-distance telephone companies and other communications users. The recession, pay-TV problems and stagnant long-distance traffic levels have revised Telesat's forecasts; it only needs two of the three satellites. The two other Anik C. satellites were launched in November, 1982, and June, 1983. Anik C1 is scheduled to be launched by the U.S. National Aeronautics and Space Administration's Challenger space shuttle next February. Telesat has agreed to assume the risks of launch and said it will turn over the satellite to the new owner only "after launch and certification of its health. [Text] [Toronto THE GLOBE AND MAIL in English 12 Oct 84 p B3]

MITEL FIRST-HALF LOSS--Mitel Corp. has announced a first-half loss about 3-1/2 times that of a year earlier, despite higher revenue. The maker of telecommunications equipment, based in Kanata, near Ottawa, said yesterday its net loss in the 26 weeks ended Aug. 24 jumped to \$27.84 million, or 79 cents a share, from \$8 million, or 21 cents a share, in the first half of last year. Revenue grew to \$165.26 million from \$139.34 million. In the second quarter, the net loss was \$10.05 million, or 28 cents a share, compared with the year-earlier loss of \$3.5 million, or 9 cents. Revenue rose to \$93.48 million from \$75.735 million. "Progress was made in the quarter, although a loss has been recorded, as expected," president Terence Matthews said in a news release. "Revenue in the second quarter was 30 per cent over the first quarter of this year and 23 per cent over the second quarter of last year. Mitel expected continuing improvements throughout the remainder of this fiscal year." [Text] [Toronto THE TORONTO STAR in English 5 Oct 84 p E3]

NORTHERN TELECOM THIRD-QUARTER PROFIT--Northern Telecom Ltd. has reported record profit and revenue in the third quarter as well as in the first nine months of 1984. The Mississauga-based subsidiary of Bell Canada Enterprises, Inc. said yesterday its third-quarter profit jumped 51 per cent to \$75 million, or 60 cents a share, from \$49.5 million, or 44 cents a share, in the same period last year. Revenue rose 39 per cent to \$1.027 billion from \$739.5

million. For the nine months, profit rose 33 per cent to \$210.8 million, or \$1.77 a share, from \$159.3 million, or \$1.45, a year earlier. Revenue climbed 28 per cent to \$2.9 billion from \$2.33 billion. Northern Telecom said it also has a record high backlog of orders: \$2.5 billion as of the end of September. [Text] [Toronto THE TORONTO STAR in English 23 Oct 84 p F4]

CSO: 5520/17

PLANS FOR INTRODUCTION OF TELETEX, VIDEOTEX SYSTEMS

Bucharest REVISTA ECONOMICA in Romanian No 43, 26 Oct 84 pp 21-23

[Article by Constantin Serbu, Bucharest Polytechnic Institute]

[Text] Telematics was created during the 1980's from the technologic and systems convergence of information processing and telecommunications. Its creation was aided by the development of electronics, and particularly by the development of large and very large scale integrated circuits.

Telematics concerns systems and services that can be offered to subscribers of telecommunications networks (telephone and/or TV), services that are different from conventional telephone and telegraph. These services make it possible to receive pages of information of a documentary nature from a public or private (closed) network, including consultation of archives, libraries--with reservations capabilities, banking and financial operations, message transmission, and so on.

Among these systems and services are teletex, telefax (remote copies), electronic mail, teleconferences, videophones, videoconferences, slow motion video (slow scan TV) videotex, and office automation. Systems and services which use suitably adapted black and white or color (video) television screens for their displays, are also called videoinformation systems.

Videotex Systems

In the simplest formulation, it can be said that videotex systems allow the information stored in a computer memory to be displayed on the screen of a black and white or color television set. The complete definition given by CCITT (International Consultative Committee for Telephones and Telegraphy) covers the category of electronic systems which allow the editing, storage, and retrieval of information in the form of standard pages from a data base (or data bank), by means of one or more computers, as well as the transmission, reception, and display of these pages on the screen of a black and white or color television set, or on a display screen, equipped with appropriate interfaces.

Videotex systems can be:

Unidirectional systems, in which the information grouped in a number of pages is transmitted in batches to a subscriber which remains passive, in the sense that he can select only one given page from the transmitted batch.

Transmission can be received on a TV channel during a program, or on a dedicated TV channel. The transmission can take place through radiation, as in the case of conventional television, or through coaxial cables or fiber optics, but always at the speed imposed by TV. The systems may use two or four TV lines or the entire channel.

Bidirectional or interactive systems, in which the information is transmitted on demand along a telephone line, coaxial cable, or optical fiber, at the speeds allowed by these media. These systems allow not only requests for information, but also the transmission of messages, reservations, and so on.

The names adopted for these systems vary from one country to another. For unidirectional ones, England for instance uses TELETEX, CEEFAX (BBC), or ORACLE (IBA); France, ANTIOPEDIODON; FRG, VIDEOTEX; Italy, TELEVIDEO; and so on. England calls bidirectional systems VIEWDATA or PRESTEL; France calls them TELETEL; FRG, BILDSCHIRMTEX; Italy, VIDEOTEL; Canada, TELIDON; and so on.

In general, these systems can be expanded to a national scale with public or home subscriber terminals, and with closed circuit systems for institutions and enterprises. The systems differ in their displays, terminals, transmission, and so on.

The different displays are alphamosaic, alphageometric, and alphaphotographic.

The alphamosaic system displays 24 lines of 40 characters. The alphanumeric characters are composed of 5x7 dots from a character matrix of 6x10 dots, with a definition of 240x240 dots per image. The system has 62 graphic characters, which are obtained by dividing the 6x10 matrix into 2x3 points. Graphic displays therefore have a reduced definition of only 80x72 points.

In alphageometric systems, graphics are created from instructions based on geometric fundamentals: points, lines, arcs, polygons, and so on, to achieve better definition. The system does not rely on the transmission channel and terminal. Depending on the quality of the terminal, it is possible to obtain definitions ranging from 1024x1024 to 80x60 points. A conventional value is 320x240 points.

Alphaphotographic systems provide the same definition as television.

The quality of graphics can be improved by using additional alphabets that contain dynamically redefinable character sets. Also possible are hybrid methods such as alphamosaic for text and some graphics, and alphageometric or alphaphotographic for high definition graphic images.

The information is transmitted through telecommunication networks. The television network is generally used for Teletex; the data is entered into the TV channel at a speed of 6.9 Mb/s. Videotex uses public switched telephone lines at a speed of 1200 baud. Calls and page requests are made at a reduced speed of 75 baud. When the lines allow it, higher speeds of 4800 or 9600 baud are used to display pages more rapidly.

Higher speeds can be used when standard digital networks or networks for integrated services are introduced. Even at the rate of 64 Kb/s, the hybrid system Fotovideotex (alphamosaic and alphaphotographic) can produce an image in a maximum of ten seconds.

The public or dedicated telecommunication networks can be local, national, or international. They can interconnect subscribers and provide access for closed circuit subscribers to a national network or vice-versa (access to third party data banks).

In addition to conventional terminals, it is also possible to use suitably adapted minicomputers (personal or home computers). It is also possible to use multipurpose terminals for videotex, minicomputers, and even text processors (word processing), with displays of 80 characters per line and appropriate facilities.

To interconnect various units into a system, standards have been formulated for character codes, display formats, graphic characters, terminals, line codes, telesoftware, and so on, as well as protocols for communication networks and videotex.

Applications of Videotex Systems

The first, and for the time being, most important application, is the retrieval of information by institutions, enterprises, and the general public. It should be mentioned in this respect, that videotex provides the broadest possible access for information processing. The information stored in data banks can be obtained and displayed on the screen of black and white, but preferably color, television sets. In addition to the information stored in videotex data banks, access can be obtained to information in conventional computer data banks through appropriate procedures, not to mention selective publicity information.

The next stage of videotex is to provide message transmission among subscribers, program (software) transmission for computing, video games, and so on.

Another important application involves transactions and reservations for banking and commercial operations, telepurchasing (mail orders), ticket reservations for tourism, trains, planes, theaters, and so on.

Important applications are foreseen for training and education, and for medicine, remote monitoring, consultations, diagnosis, and treatment.

Writing will also benefit from videotex developments. It is difficult at present to foresee exactly the interaction between the written press and electronic information methods. Considering that paper availability is not unlimited, that it is a polluting product, that its production consumes energy, that published news have a renewal time of 24, 48, or more hours, that the information presented is not selective, and that distribution is burdensome and costly, it is clear that electronic information systems of the videotex type will play a significant role in information activities.

Lastly but not last, videotex with inexpensive terminals lends itself very well to office automation equipment. This automation is necessary to increase labor productivity in office activities (information, files consultations, correspondence, decisions, and so on) in order to make this productivity comparable to similar activities in industry and agriculture. A study performed in the United States shows that the productivity of clerical personnel is 4 percent compared 90 percent for other workers. The cause rests in the work methods being used and in the ratio of investments being made. In 1976 for instance, \$31,000 were invested per industrial worker, \$54,000 per agricultural worker, and only \$2300 per clerical worker. These figures show the effort that must be made in investments and activities, a situation that is becoming more urgent as the transition to higher economic development creates 1.5 clerical workers per industrial worker, which means that more than one-half of a country's current population will work in computer technology, telematics, office automation, and so on.

Worldwide Development of Videotex Systems

In England, regulated Teletext system service began in 1976; today, it has more than one million users, owners of color television sets equipped with teletex decoders. Regulated Prestel service (bidirectional videotex) exists since 1979. The number of subscribers is several tens of thousands.

In France, Teletext service broadcast over a TV channel--named Antiope-Diodon--has been operating for about two years, covering almost the entire country. In the bidirectional Teletel system service, following two successful experiences--one, information retrieval and transactions, and two, an electronic telephone directory--the entire country is being supplied with terminals which will provide telephone directory and several other services.

Until now, these countries have used alphamosaic systems which allow low definition graphics. Starting in 1984, they, as well as FRG, will begin using an improved system based on a joint standard, known as CEPT (European Conference for Mails and Telecommunications). Tests have been carried out in other European countries and regulated services are being installed in Italy, Switzerland, Austria, Spain, Holland, Denmark, Finland, Sweden, and so on.

Unlike the European countries which are using alphanumeric videotex systems with increasingly good graphic capabilities, according to a downward compatible five-level hierarchy, America is using another approach. The United States and Canada are in a good position in terms of personal computers

with graphic displays. For this reason, they have developed alphanumeric videotex systems which provide high quality graphics and of course, alphanumeric characters. Canada has thus introduced the Telidon system with pilot tests. The United States has formulated only standards for uni- and bidirectional videotex systems and after adopting uniquely North-American standards which the Canadians have also accepted, they will begin manufacturing videotex terminals and adapters for personal computers. At the same time, the United States is implementing a number of European systems which are more or less compatible.

In 1982, America had 325,000 personal computers against 4000 videotex terminals, and it is estimated that in 1989 it will have 3 million personal computers and 4 million videotex terminals. The expense for videotex systems will represent about \$10 billion during the same year. Because it uses several thousand characters, Japan has adopted an alphaphotographic system named CAPTAIN. Tests have been carried out, and the trend appears to be toward a hybrid system which will also be compatible with the European systems.

Among the socialist countries, only Hungary, after several years of testing, introduced the Teletext service in 1983. It manufactured 10,000 color television sets with teletext decoders, using specialized circuits imported from Philips. The editing and transmission portion is also imported; it plans to manufacture another 50,000 television sets with decoders during 1984. Bulgaria is currently conducting tests with imported circuits as well. USSR and Czechoslovakia have imported complete installations from England for the Siberian gas line, for the Moscow clinical hospital, and so on.

Since 1971, 80 tests have been conducted in various countries, investing 2000 million in research and design, which amounts to about \$6 million per test.

State of Development in Romania

In Romania, starting in 1980, the Applied Electronics Department at the Bucharest Polytechnic Institute (IPB) began studies and research in videotex systems. At the 1982 TIB (Bucharest International Fair), Romania showed a color VTX display based on a collaboration between ICE (Electronic Computer Enterprise) and ITB, which represented an additional option for the M 118 microcomputer. Since 1983, the work has been advancing thanks to the support received from the department leadership and the institute, and to the interest demonstrated by CNST (National Council for Science and Technology), materialized in a research contract for 1983-1985. The following developments have been achieved for the Teletext system so far: editing terminal; storage, retrieval, and TV signal input system; transmission through the M 118 microcomputer with hardware and software specialized for an alphanosaic system, and with functions for additional options (color, height, double printing, sensing, cursor, highlight/blanking, additional alphabets) with serial or parallel transmission; and a decoder, interface, and keyboard for a television set produced by the Electronica enterprise with video frequency

input. The necessary programs have also been written. Work is currently in progress on a test page generator for tuning the TVC receiver, and tests are being planned to evaluate problems associated with propagation, antennas, and receivers. Bidirectional videotex terminals have also been built, and tests have been conducted on a dedicated line with and without Fellas modems at 1200 baud.

The intent is to build an intelligent alphanumeric terminal with three 1 Kb memory boards for improved graphics, and a graphic terminal for an alphageometric system. The introduction of these systems in Romania is dictated primarily by: the increasingly extensive penetration of computerization especially for training young people in activities that will dominate society in future years; increase the efficiency of information and documentation of any kind; increase efficiency in operations or planning decisions; increase labor productivity, particularly in administrative activities in all fields; reduce the number of people involved in administrative activities; introduce additional options for Romanian products (computer technology and television sets); increase the competitiveness of Romanian products; provide access to data banks in videotex networks being implemented throughout the world; assure efficient means of information and communication, so as to reduce travel under energy crisis conditions; provide conversational capabilities for working at home; make it possible to reserve seats, to conduct commercial and financial transactions, transmit messages, obtain medical consultations, and so on, without personal travel; and reduce paper consumption.

For these purposes, IPB has sent CNST a program proposal to gradually introduce the Teletext system in Romania by 1985, and videotex by 1990, indicating the organizations capable of participating in this effort, including the distribution of research, manufacturing, implementation, operation, service, information supply, and so on.

The introduction of videotex systems and their evolution in our country depends on several factors which are:

Efficient coordination of all institutions and enterprises involved, by CNST, or by a specialized government or interministerial agency, which will concern itself with the introduction of videotex systems; development of telecommunication lines, conventional lines, dedicated lines, television cables, and optical fibers, which will increase transmission speed; build digital networks for integrated services; produce modems for appropriate transmission rates; import, adopt, or design specialized devices, particularly for teletex decoding; increase the production of color television sets, provide them with VF and RGB inputs for peripherals, and include the specifications necessary for receiving Teletext signals; diversify the models of color television screens so that their dimensions may be suitable for offices (35-42 cm); design a miniprinter which is extremely necessary as a peripheral for office automation; find the best avenues for Romania to adopt these systems and services, considering the experience of other countries; based on favorable conclusions drawn from tests, find a

strategy for installing a large number of terminals in one or several systems, being aware that this is the only way to reduce costs and obtain a rapid expansion; adopt a videotex standard which will allow an international exchange of information; build terminals and networks which will allow subsequent expansions to higher levels of videotex systems, by assuring compatibility between terminals and networks of different generations; and establish the necessary data banks at an early date.

Economic and Social Implications

As a new blending of telecommunications, computers, and information processing, the videotex system and services have several general economic implications:

- a. Higher labor productivity in all sectors: industrial, agricultural, administrative, research, design, and so on;
- b. Since it is simultaneously an information and transaction system, it will be possible in the future to: purchase, transfer funds, and consult files from home or local offices rather than at central institutions. Activities can thus be decentralized from city centers;
- c. This development will lead to substantial reductions in transportation needs, thus reducing energy consumption, bringing ecologic improvements, and so on;
- d. Although at first sight, by increasing productivity and therefore efficiency, large amounts of manpower would be eliminated in the administrative sector, the personnel would be requalified for work in direct production spheres as information processing personnel.

Some of the social aspects would be:

- a. People would have direct access to information, with the use of specialized intermediaries becoming increasingly rare;
- b. More work would be performed at home and near home, and not as much in urban centers or crowded areas;
- c. If the entire population is connected (at home or work location) to a national interactive videotex system, and if economic, social, and political information is entered into the system, it is possible to establish a decentralized economic management based on feedback principles;
- d. The introduction of videotex systems appears to have an undesirable effect on human and social relations, with people spending more time in front of terminals instead of in personal contacts. But since the people will have more free time due to rapid access to information, they will save time otherwise spent travelling and will have time for personal contacts or other activities which will enrich their professional or cultural lives.

In conclusion, we want to point out that we have attempted to present some of the important technical, economic, and social aspects of telematic systems in general and of videotex systems in particular. All their implications are obviously difficult to foresee at this time. But it is equally true that since an increasingly large number of countries are making great efforts to develop these systems, it is absolutely necessary for us to know and test them at an early date, so that we might use them to increase the competitiveness of Romanian products and for the general good of society.

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CSO: 5500/3026

GUAYAQUIL STATION CLOSED PENDING INVESTIGATION

PA031542 Buenos Aires LATIN in Spanish 0916 GMT 3 Nov 84

[Text] Quito, 3 Nov (LATIN-REUTER)--The Ecuadoran Government has closed for an indefinite period of time a radio station that broadcast charges made by Guayaquil Mayor Abdala Bucaram, who accused officials of abetting the crime of the Guayaquil municipal chief of police.

An official communique accused Radio Democracia of Quito of attacking "the morality, good habits, and national security" by airing Bucaram's charge.

Bucaram blamed several ranking government officials for the death of Police Chief Delfin Arce during a skirmish between rival political groups early this week.

The mayor had said that the officials mentioned had planned Arce's death and accused them of abetting the perpetrator of the crime.

A communique issued by the Secretariat of Public Information reported that Radio Democracia will be closed until an investigation is carried out to determine whether or not it violated Ecuadoran laws.

Four radio stations in Guayaquil, some 416 km southwest of Quito, received similar warnings that obliged them to temporarily suspend their broadcasts.

CSO: 5500/2017

ST. EUSTATIUS RADIO STATION

Willemstad AMIGOE in Dutch 4 Sep 84 p 9

[Article: "Radio Statia Waits For End of Hurricane Season. For Start of Broadcasts"]

[Text] St Eustatius -- After much difficulty and effort, Radio Statia will be a reality on the island in the near future, according to the management of the St Eustatius Broadcasting N.V. [Inc.].

Thanks to people of broad vision with the progress of the island in mind, the St Eustatius Broadcasting N.V. joined forces with the St Eustatius Development Foundation in order to get the station started. The goal has been accomplished with the collaboration of Cede-Antiyas.

The transmitter station was built in Zeelandia and the studio was assembled at the Korthalsweg. An enormous amount of very modern equipment was purchased, the total cost amounting to 275,000 guilders. In the month of September, the last of the equipment will arrive, after which technicians of Industrial Electronics from Curacao will begin setting up the radio station in order to get it on the air. In all likelihood, these activities will take two weeks. The construction of the tower in Zeelandia, a marvelous bay to the Atlantic side of the island, and the tuning of the transmitter will have to be done very precisely, and will take most of the time. That is being delayed until the threat of possible hurricanes has diminished, after which these activities will commence.

The tower will be 200 feet high (approximately 70 meters) and will be a striking sight against the mainly green landscape, for it will be painted red and white. At night, a red light at the top will mark the tower. A warning to the public will be posted indicating the fact that high voltage is being used. Mr Glenn Gibs has been appointed to oversee the performance of the broadcasts. The exact date of the opening of the radio station is not yet known. This will be made public by management in due course. After having waited for such a long time, this day is anxiously anticipated.

TELEPHONE EXPANSION PLANNED; BRAZILIANS PROTEST JAPANESE BID

Lima OIGA in Spanish 22 Oct 84 pp 11-12

[Text] In response to ongoing complaints by consumers about the service offered by the Peruvian Telephone Company, Inc (CPTSA) and its constant rate increases, the directors of that state enterprise held a press conference last week--a rather disorderly one, in which newsmen had no opportunity to ask questions--during which they held that most of the criticisms are unfounded and that everything will improve upon completion of the current 325 million dollar expansion plan, which will extend the present telephone network by 60 percent.

According to the general manager of CPTSA, Julio Caverio Jara, telephone rates in Peru are much lower than those of many Latin American countries, including Ecuador and Bolivia; they are below the rates paid for electricity and drinking water; and their impact on the family pocketbook is minimal.

Juan Antonio Aguirre Roca, president of the board of directors, indicated that periodic rate increases are inevitable if the expansion program is to be completed; however, he added that next month's increase will be smaller than previous ones.

To avoid more expensive service, Caverio Jara, CPTSA general manager, proposed that the state exempt public telephone service from taxes on business holdings and the tax on capital gains, which in CPTSA's case means a payment of 20.5 billion soles for this year. He also suggested that CPTSA, as part of its self-financing, should be given the same treatment accorded ENTELPERU [National Telecommunications Enterprise of Peru], which has an expansion fund at its disposal.

Deputy Francisco Aramayo, minister of transportation and communications, who was present at the meeting, announced that the Telephone Rate Regulatory Commission is studying the possibility of reducing by 50 percent the rate of telephone service between 8 pm and 8 am, "so that this public service may be accessible to the majority of the people."

The reporters noted these statements, but they would have liked to ask about many other things, such as, what is going to be CPTSA's attitude with regard to the order for 2,000 public telephones placed with the Japanese MITSUI firm,

which has been appealed by Apoyo Empresarial S.R.L., the firm representing Brazil's ICATEL in Peru. According to the appeal, the ICATEL bid is nearly \$300,000 lower than the MITSUI bid, and offers greater advantages, both technologically and economically, given the fact that ICATEL's contract with the CPTSA would benefit from the Peruvian-Brazilian agreement which permits more suitable financing than that offered by MITSUI.

It is known that on the basis of this appeal, about which Apoyo Empresarial S.R.L. notified the Office of the Controller General of the Republic, the Ministry of Transportation and Communications, ENTELPERU, the National Development Commission (CONADE), the Bicameral Commission for the General Budget of the Republic and the House of Deputies' Commission for Investigating the CPTSA, the board of directors of the Peruvian Telephone Company has put off signing the contract with MITSUI. Where does the bid stand, then? This is what CPTSA ought to explain.

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CSO: 5500/2007

TELEPHONES TO UTILIZE FIBER OPTICS, LASER TRANSMISSION

Lima EL COMERCIO in Spanish 23 Oct 84 p A-6

[Text] The Peruvian Telephone Company is installing in Lima fiber optics and laser beam transmission equipment which will permit sending a large quantity of telephonic information without utilizing electric current wire.

The announcement was made by Carlos Romero Sanjines, general director of the National Institute for Telecommunications Research and Training (INICTEL), and also director of Telecommunications of the Ministry of Transportation and Communications.

He noted that in the near future this would permit the use of digital networks of integrated services, which will transform the telephone into a terminal which can connect to computers, receive television, telex and teletype signals, etc., all using the same line.

All of the interconnections among the large centers under construction are being made with optical fiber cables. This system will be introduced slowly as the 150,000 new telephone lines are installed.

Plan for Latin America

Romero Sanjines also announced that Peru has been elected to preside over the Commission of the Plan for Latin America, which will propose regulations and technical procedures to improve telecommunications.

The election was held during the eighth plenary assembly of the International Consultative Committee of Telecommunications, an entity of the International Union of Telecommunications of the United Nations Organization.

These declarations were made after the inaugural ceremony of the second International Course of Digital Communications Engineering.

The act was carried out in the training center of INICTEL and was presided over by the deputy minister of communications, Eulogio Pena Naves. Also present were the first secretary of the embassy of Japan, Iore Fujita, and the resident representative of the Agency of International Cooperation of Japan (JICA), Teruki Sasano.

The course, which is supported financially by JICA, has as its objective the training of representatives from 12 countries in the use of digital communication systems. It will continue until 28 November.

PLAN TO EXPAND NORTHEAST TELEVISION SERVICE TOLD

Calcutta THE STATESMAN in English 17 Oct 84 p 9

[Text] SANTINIKETAN, Oct. 16--A massive plan for expansion of the television service in the northeastern region has been approved by the Centre with an outlay of Rs 36.43 crores, a senior official of the Union Ministry for Information and Broadcasting said here today, reports PTI.

The plan envisages the setting up of three transmitters of 10 KW each at Silchar, Dibrugarh and Tura, five transmitters of 1 KW each at Shillong, Kohima, Imphal, Itanagar and Aizawl, and six low power transmitters.

Programme production facilities are proposed to be set up at Silchar, Dibrugarh, Tura, Shillong, Kohima, Imphal, Itanagar and Aizawl. A programme production and feeding centre is proposed to be set up at Gauhati.

All relay centres in the North-East would be linked to the programme feeding centre at Gauhati via INSAT 1-B. These transmitters will relay the national programme put out from Delhi, special North-East region programmes put out from Gauhati--both via INSAT 1-B and some purely local programmes produced at the centres with the help of special equipment.

Transmitters and other necessary equipment have been ordered and the preliminary work for selection of sites has been initiated.

With the implementation of this scheme, about 80% of the population of the North-East region is expected to get TV coverage, against the national average of 70% at the end of the Sixth Five-Year Plan period.

CSO: 5550/0014

BHARAT ELECTRONICS SAID TO PIONEER 'REVOLUTION'

Bombay THE TIMES OF INDIA in English 24 Oct 84 p 14

[Article by D. S. Gururaj Rao]

[Text]

It is as much a misnomer to associate Bharat Electronics Ltd., (BEL) with radio valves, with which it launched its production activities, as it is to associate HMT with only watches. BEL has since grown in size and stature pioneering electronics revolution in the country and building in-house designing capacity for production technologies and processes.

This thirty-year young public sector enterprise executes orders from several ministries like defence, communications, information and broadcasting, civil aviation and railways besides catering the private sector entertainment electronics industries by turning out 400 types of components and equipment from tiny transistors and integrated circuits to mammoth radars.

The assimilation of product know-how and contemporary production technologies for equipment and components from lessons learnt from the initial collaboration with a French firm and 39 know-how agreements has been so striking that BEL is now being looked upon as a fountainhead of technology in the country with internationally reputed companies seeking BEL to join for joint development ventures.

BEL is now gearing itself to meet the challenges to be posed to it during the Seventh Plan period. Defence requirements account for about 80 per cent of BEL production. Information and broadcasting ministry has set a tight and demanding schedule for its TV expansion programme and radio net work. BEL has already supplied 64 TV receivers (TVROS) out of the 80 ordered and intends completing delivery by this month-end, a month ahead of schedule. Similarly, 29 low power transmitters out of 69 ordered have been supplied and complete delivery by the end of next month will be as per schedule. Fifteen high power transmitters have been supplied

over the last two years. Under the crash programme requirements, BEL has to supply 13 such transmitting stations by March next year.

In helping Doordarshan to change the existing black and white studios into colour, BEL has taken up manufacture of some colour TV studio equipment under collaboration with Bosch of West Germany, besides the design, development and manufacture of colour transmitters and TVROS. Development has been completed for some studio items like sync pulse generator, stabilising amplifier and video processing equipment. BEL is working on video text for languages and solar-powered remote-operated low power transmitter for shadow regions (behind hills). It has taken a turn-key job from NCERT for colour studio equipment for seven centres for production of educational TV programme in colour. Equipment for the first centre is expected to be ready by March next year.

BEL is developing a new version of FM transmitter with stereophonic facilities for radio broadcasting with substantial orders expected in the Seventh plan. It is computer-controlled with built-in facilities for monitoring of the operating condition of the equipment. It is also developing one kw and ten kw medium wave broadcasting transmitters and 50 kw short wave transmitter.

In the area of radar development and manufacture, BEL has recently developed a multi-purpose meteorological radar for weather analysis. An advanced version of this is the arismet radar for the army—a mobile station which can determine meteorological parameters needed for accurate gun firing. The undertaking has also designed and developed long range air warning radars and medium range air and surface warning radars. Similarly, radars for identification of friend or foe (IFF) has been developed and supplied

for augmenting the capability of military radars and for surveillance at civilian airports.

Development of navigational radars for use in medium-sized warships and boats has been completed, and are comparable in performance and reliability to foreign systems. In production are BEL-developed computer-based target simulators to simulate air and surface targets for training radar operations on board the ship. Two versions of non-directional Beacons have been developed and are in production line for civil aviation department. Also, a portable three kw Beacon for the air force is being developed.

BEL, in pioneering activities in the field of radio communications, has developed and manufactured equipments covering the entire frequency spectrum from low frequencies to UHF and microwave frequencies which meet the needs of defence services, para-military units, posts and telegraphs, railways and oil companies. BEL has also undertaken total system design and installation on turn key basis of communication systems and networks both on land as well as warships.

Detailing the achievements of BEL with a sense of satisfaction and pride, Mr. N. L. Krishnan, chairman and managing director told the press which was conducted round the workshops recently, that the philosophy of BEL is total vertical integration in production starting from raw materials, which enables it to imbibe technology and give it capacity to develop new products.

Components account for 20 per cent of BEL's turnover. In the area of professional tubes BEL has developed high power transmitting tubes for AIR as an import substitution. Now microwave tubes such as Magnetrons and Klystrons for use in radars are being developed under a licence agreement. It is also developing ICs for tape-recorders, black and white and colour TV receivers.

He said that the undertaking has developed liquid crystal displays (LCDs) for automotive and industrial instruments. Many more devices for other professional users are on the anvil. BEL developed and manufactured space quality solar cells which have been accepted by ISRO for use in satellites. Many new crystal devices like Tecon, Monolithic Crystal Filters, Crystal Ovens have been developed.

Mr. Krishnan is hopeful of the BEL's Talaja unit near Bombay starting production of glass shells for TV picture tubes by December next year. In the meantime, the government has cleared the setting up of the third black and white TV picture tube plant of BEL at Talaja with a capacity of five lakh tubes per annum. The entire plant will be designed and set up in house as was done for the second plant in Bangalore.

The chairman is also optimistic that with the commissioning of new units at Talaja, Fanchkula near Chandigarh and Koidwara together with rationalisation of production in the existing units BEL would cross Rs. 400 crore mark in turnover by the end of this decade.

BRIEFS

NEW TRANSMITTER COMMISSIONED--(New Delhi: PTI)--A high-power transmitter has been commissioned at Bhopal. With its commissioning, the power of the relay centre has been augmented to 10 kw from the present 100 w, according to a press release. It may be recalled that the 100 w (low power) transmitter was commissioned at Bhopal on the eve of IX Asian Games in November 1982. The high power transmitter will operate on channels and will have a service range of about 120 kw. It will provide coverage to about 48.58 lakhs people including 36.34 lakhs of the rural population. The districts of Vidisha, Sagar, Narsimhapur, Raisen Hoshangabad, Sehore, Rajgarh and Shajapur are expected to be covered by the high power transmitter. [Text] [Bombay THE TIMES OF INDIA in English 25 Oct 84 p 4]

INDO-BHUTAN TELECOM AGREEMENT--NEW DELHI, Oct. 22--India and Bhutan today signed an agreement for expanding and improving the scope of telecommunication services between them. Mr. K. Thomas Kora, Secretary in the Ministry of Communications, signed the agreement on behalf of Government of India, while Mr. Dasho K. Letho, Secretary, Communications and Tourism, Government of Bhutan, signed it for his country. The agreement covers provision of an Indo-Bhutan microwave link between Cooch Behar and Thimpu, which is to be commissioned shortly. This would facilitate telex, telegraph and telephone services between the two countries and provide Bhutan with an access to the international telecommunications network through electronic trunk exchanges at Calcutta and Delhi. [Text] [Madras THE HINDU in English 23 Oct 84 p 9]

CSO: 5550/0017

CAPE VERDE

BRIEFS

FRENCH COOPERATION IN TELECOMMUNICATIONS--A financing agreement in the amount of 2.2 million French francs (approximately 22,000 contos) was signed on 2 October by Ambassador Jacques Bertrand and Secretary of State for Cooperation and Planning Comrade Jose Brito, within the framework of French-Cape Verdean cooperation. The present agreement pertains to the financing of complementary equipment that will enable the Varzea telecommunications ground station--also supplied within the framework of this cooperation--to be in condition to operate accounting to the standards of the new telecommunications satellite, the standard B Intelsat V which will go into operation beginning in 1985. The use of the new satellite involves the need to make adaptations in the station's reception-transmission equipment, which will be performed by a specialized firm. [Text] [Praia VOZ DI POVO in Portuguese 6 Oct 84 p 3] 8711

CSO: 5500/20

CENTRAL AFRICAN REPUBLIC

BRIEFS

FRG RADIO PROJECT--The Federal Republic of Germany is to provide 1.5 million DM for the installation of a rural radio in our country. This financial aid falls within the framework of the technical assistance granted by the FRG to the CAR. The German ambassador to CAR and the CAR minister of planning signed the agreement. [Excerpts] [Bangui Domestic Service in French 1800 GMT 8 Nov 84 AB]

CSO: 5500/29

EQUATORIAL GUINEA

BRIEFS

TELECOMMUNICATION WITH PRC DISCUSSED--Communications and Transports Minister [title as heard] Carlos (Nzien Nzuga) today received in audience the economic advisor at the PRC embassy in Malabo. During the audience, Minister (Nzien) and the Chinese diplomat discussed issues related to cooperation between Equatorial Guinea and the PRC in the telecommunications field. [Excerpts] [Malabo Domestic Service in Spanish 1900 GMT 8 Nov 84 AB]

CSO: 5500/29

GUINEA-BISSAU

BRIEFS

NEW TELEPHONIC EQUIPMENT--A delegation from the department of postal research of the Information and Telecommunications Ministry visited Gabu region with the objective of finding out how the work is progressing in the local postal station as well as studying, on location, the conditions which would lead to the installation of new telephonic equipment in the areas of Pitche, Pirada, Sonaco and Boe. The project is now in its final stage awaiting only for financing from international organizations. [Bissau NO PINTCHA 20 Oct 84 p 15]

CSO: 5500/32

NEW TELECOMMUNICATIONS NETWORK TO BE READY NEXT YEAR

Kaduna NEW NIGERIAN in English 22 Aug 84 pp 1, 13

[Text]

A NEW national integrated telecommunications transmission network being put up by the Posts and Telecommunications (P and T) department will be ready by the end of next year, Minister of Communications, Lt. Colonel Ahmed Abdullahi has assured.

The minister told the New Nigerian in Lagos that he expected 80 per cent work on the project which would cover the nation to be completed by the end of the year.

He said if the project was completed on schedule, it would considerably improve the internal communications network and the under-utilised external system.

Colonel Abdullahi said the only problem facing the ministry was finance, but noted that priority had been given to the project, and that from whatever money was given to the ministry, a certain percentage would be spent on it.

The minister confirmed that the P and T had complied with a directive that the two external gateways in Lagos and Kujama be linked. It was completed last week.

The minister, impressed, said he had always known that we had competent engineers. All they needed was encouragement and a little push.

Lt.-Col. Abdullahi however said it would not be possible as set to link the 10 northern states to the Kujama Earth Satellite station until all the major exchanges

were completed. He said as at now, only the Jos exchange was ready while the others were still under construction.

Meanwhile, the installation of a telex system at the NET complex in Kaduna has been held up because NET had not been able to pay 1.4 million Naira balance for the equipment.

Managing Director of the NET, Mr. Tunde Oyeyipo told the New Nigerian that the project was held up because the American manufacturers had not supplied the equipment until full payment was made.

He blamed the delay in the payment of the balance on "bottlenecks" at the Ministry of Finance and the Central Bank, adding "as soon as the balance is paid to the manufacturers, the system will arrive", he said.

CSO: 5500/3

NEED TO 'RESHAPE' EXTERNAL NETWORK CALLED URGENT

Kaduna NEW NIGERIAN in English 25 Aug 84 p 9

[Text]

THE newly constituted board of the Nigerian External Telecommunications (NET), has been directed to return sanity to the company with immediate effect.

Giving the directive at the inauguration of the new board in

Lagos yesterday, the Minister of Communications, Lt.-Col. Ahmed Abdullahi said that the need to reshape the company had become particularly urgent because of its "crucial importance" to the political, economic and security of the country.

The minister recalled stories of shocking management problems, incessant petitions and cases of fraud and malpractices which were published in the national newspapers about the NET which, he said, had caused "great embarrassments" to his ministry and NET.

The effect of this situation, he said, was that the management of NET could no longer command the confidence and trust expected from the company by the staff

and the general public.

The new interim board which is headed by the Permanent Secretary, Ministry of Communications, Malam Ibrahim Aliyu has the following members: Mr S. O. Olorunisola, Assistant Director, Telecommunications (P and T), Mr Tunde Oyeyipo, Managing Director (NET), and Malam Umoru Wunti, Company Secretary (NET).

Others are Lt.-Col. Remi Oyewole, Assistant Director of Communications, Supreme Headquarters and Mr. M. O. Akande, Federal Ministry of Finance.

In his brief response, Malam Aliyu said that as permanent secretary, communications, the problems of NET were not new to him.

CSO: 5500/3

NEED FOR COMMUNICATION POLICY STRESSED

Kaduna NEW NIGERIAN in English 18 Sep 84 p 7

[Text]

A CALL has been made for the evolution of a coherent and purposeful national communication policy that will be in tune with the country's developmental needs.

A Chief Information Officer, Mr. Ademola James, made the call in a paper presented at in-house seminar organised by the Information Directorate of the Federal Ministry of Information, Social Development, Youth, Sports and Culture, in Lagos.

He suggested that the federal department of information should spearhead the crusade through the organisation of a national seminar to which experts from different fields should participate.

Mr. James thought that if such a policy was eventually adopted, it would go a long way in pro-

moting national understanding.

It would also assist the entire communication/information delivery system in the country to grow and develop to the requirements and benefit of the nation as well as for the betterment of all Nigerians, he pointed out.

Mr. James, who is attached to the public enlightenment branch of the directorate of information, also advocated a radical restructuring of the federal department of information.

He urged that this was desirable to improve its proficiency and effectiveness as a public information delivery machinery.

In another paper, a lecturer at the national institute of public information, Kaduna, Mr. Femi Oyawale, urged that adequate

funds be made available to train and motivate information staff at all levels.

He argued that ad-hoc arrangements put together in fits and starts could never achieve the objectives of effective information dissemination.

Mr. Oyawale had earlier dealt at length with various courses offered at the Kaduna institute and pleaded for more funds to be made available to enable it expand its services.

CSO: 5500/3

MERGERS OF RADIO, TELEVISION STATIONS REPORTED

Kano State

AB052158 Lagos Domestic Service in English 2100 GMT 5 Nov 84

[Text] The Kano State television and radio stations have been merged to form the Kano State Broadcasting Corporation. This was announced in Kano today by the state commissioner for information and home affairs, Alhaji Ibrahim Ismael.

Under the reorganization, Mallam Adamu Abubakar, a former acting chief information officer, was appointed managing director of the corporation, while Alhaji Lawal Bisiako, a director of finance and administration, becomes the corporation's secretary. Mallam Ahmed Aminu of the Federal Radio Corporation of Kaduna was appointed general manager, radio, while Alhaji Mohamed Yekesi of the State Ministry of Information and Home Affairs is the general manager of television.

Plateau State

AB132242 Lagos Domestic Service in English 21 GMT 13 Nov 84

[Text] Plateau Television and Radio have been merged to form the Plateau Radio Television Corporation. A statement from the office of the secretary to the state military government says the merger followed the approval of the recommendations of the committee set up to restructure state owned companies and parastatals. It adds that a sole administrator will coordinate the activities of the new corporation pending the appointment of a substantive general manager.

PUNCH Comment

AB121320 Lagos International Service in English 0830 GMT 12 Nov 84

[From the press review]

[Text] *THE PUNCH* supports the decision of the Federal Government to rationalize radio and television services in the country. The paper says the decision is timely. It advises the committee set up for the exercise to make cost effectiveness and effective coverage of the country, in terms of dissemination of information, their guiding principles. Finally *THE PUNCH* expresses the hope that the rationalization will be carried out with minimum negative effects on the economy, the information sector, and the workers.

NEL REACTS TO PETITION ON HOMELAND TELEVISION

MB151953 Johannesburg Domestic Service in English 1900 GMT 15 Nov 84

[Text] The deputy minister of foreign affairs, Mr Louis Nel, says if Bophuthatswana's television service is received outside the fixed reception areas, it will threaten the future of newspapers, and will not be in the public interest. Mr Nel rejected a petition by a delegation from Johannesburg in which the quality of the South African Broadcasting Corporations' [SABC] television programs was criticized. The delegation included the member of parliament for Sandton, Mr Dave Dalling.

Mr Nel said in terms of an agreement with Bophuthatswana, BOP-TV [Bophuthatswana television] broadcasts would eventually be beamed to 51 areas in the Transvaal, the Free State, and parts of the Northern Cape. If the spillage of BOP-TV signals was not controlled, newspapers would lose a large portion of their advertising revenue to a foreign television service. At present BOP-TV was only being transmitted to 2 of the 51 areas. Mr Nel emphasized that the government did not in any way wish to prescribe to the SABC what programs it should broadcast, but he felt that the SABC should take note of the dissatisfaction.

CSO: 5500/31

BRIEFS

CISKEI TV NETWORK--Ciskei is to get its own television network. The director in the office of the presidency, (S. Corbett), has announced that an education and religious television network, donated by the American-based Trinity Broadcasting Network, will be established near Radio Ciskei in King William's Town. He says construction will start early next year and it is anticipated that the first broadcast will be December 1985. [Text] [Umtata Capital Radio in English 0800 GMT 8 Nov 84 :MB]

CSO: 5500/26

ZAIRE

BRIEFS

MONEY FOR REGIONAL TELEVISION--The Executive Council has disbursed 15 million zaires for the installation of the Bas-Zaire television. This was disclosed by Lambu Mussalakassa, the delegate president general of the Zairean Radio and Television Office who is on an inspection and working visit in Bas-Zaire. [Text] [Kinshasa Domestic Service in French 0600 GMT 9 Nov 84 AB]

CSO: 5500/30

AUSTRIA

BRIEFS

EASTERN COUNTRIES RADIO/TV COOPERATION--On Friday [19 October] in Vienna Gerd Bacher, director general of the Austrian Radio and Television Service (ORF), and Polish Radio and Television Committee Chairman Wojciechowski signed an agreement that paves the way for numerous cooperation projects with Poland. At the same time it was reported that Bacher will visit Hungary in the spring with a large delegation. While there are no problems regarding cooperation with Poland and Hungary, ORF sources complain about the attitude of the CSSR which impedes all contacts. [Text] [Vienna DIE PRESSE in German 20-21 Oct 84 p 2 AU]

CSO: 5500/2536

FRG MINISTER DISCUSSES NATIONAL TELECOMMUNICATIONS PLANS

Duesseldorf VDI NACHRICHTEN in German 21 Sep 84 p 34

[Article: "Dispute About Successor Type for Television Satellite"]

[Text] If future direct-transmitting television satellites have less transmitter power than the German TV-Sat to be launched in 1985, then the price for the receiving systems for the television subscriber will increase by as much as four times, as Frank Mueller-Roemer, technical director of the Bavarian Broadcasting System, shows in the following article. The discussion about satellite transmitter power is to be seen against the background of a decision by the German Federal Post Office on future television satellites.

On the occasion of the Stuttgart technical congress "Telematics" last June and the presentation of the appraisal of the Federal Audit Office on the cabling plans of the Federal Post Office, Postal Minister Christian Schwarz-Schilling has supplemented his previous statements on the subject of cable and satellites through two new determinations:

--the German Federal Post Office is not striving for any general cabling of the FRG. Only conurbations and densely populated localities are to be cabled;

--the future broadcast satellite (TV-Sat) is viewed as an important supplement in the provision of additional programs for thinly populated areas (outside of the conurbations).

At approximately the same time, the Federal Post Office decided, along with the French communications administration, to establish a German-French commission of experts "TV-Sat/TDF 1 Successor System," about whose tasks it is said:

"In regard to the expected operational use of direct broadcasting satellites, in view of the necessity of guaranteeing the long-term continuity of such services and the applicability of the receiving antennas to be installed, and with the intention of making use of technological progress that can lead to a reduction in capital and operating costs, a commission of experts of the two countries will be established that is to examine the possibilities for a continuation of cooperation going beyond the 1977 German-French agreement."

Special attention is thereby to be paid to the investigation of alternative system concepts for the second generation of direct broadcasting satellites to succeed the systems TV-Sat (Germany) and TDF 1 (France)--space and ground segments--as well as opportunities to lower costs for additional satellites for the satellite systems on the first generation.

As could be learned from the German members of the commission of experts, it is foreseen that a ministerial presentation for the German postal minister will be prepared by the end of September.

The focus of the considerations of the commission of experts is the question of whether one should provide for a multiple-channel satellite system with, for example, 15 channels and low transmitter power as the system to succeed TV-Sat, TDF 1.

It is my opinion that a satellite broadcasting system with substantially lower transmitter power would lead to decisive disadvantages for the "satellite reception by everyone."

There are numerous reasons for this, reasons that I will present in the following:

--Future television programs that will be transmitted over the TV-Sat or TDF 1 broadcasting satellites now under construction can be received anywhere in the area of the FRG or France with antenna systems with a reflector diameter of 0.6 meters to 0.9 meters. Single-family houses thereby require antennas smaller than joint antenna systems for 20 or 50 housing units, for example. In single-family houses, antennas with diameters of 0.9 meters to 1.0 meter can even be mounted under glass roofing tiles. Thus in many cases, a substantially simpler and also more cost-effective assembly may well be possible--there is no need, for example, to be concerned about wind load--and this assembly is also to be recommended from the aspects of aesthetics and urban construction.

Presentation for the 1985 Communications Exhibition

--In the case of broadcasting satellites with substantially lower transmitter power--80 to 100 watts instead of the current transmitter power of 200 watts for TV-Sat--on the other hand, one needs antenna diameters of 1.2 to 1.4 meters along with outside assembly. In addition, expensive signal processing is needed.

--According to competent producer firms of antenna systems, one can reckon with a unit price of DM500 for a simple antenna system--0.6 meters in diameter, only one polarization direction, bandwidth 400 megahertz. Comparable prices for antennas with a reflector diameter of from 1.2 to 1.4 meters, in contrast, could be in the range of DM2,000 to DM2,500.

--German industry is now preparing itself for the production and sale of receiving systems for broadcasting satellites with new television sets suitable for satellites as well as adapter devices for older television receivers beginning with the international radio exhibition in 1985. The additional outlay

for individual reception are initially estimated at about DM800 to DM1,000 for an antenna without assembly plus additional costs for the purchase of a new television set or adapter equipment.

--Instead of one television program, one satellite broadcasting channel can be used to transmit 16 stereo broadcasts in a quality comparable to that of a CD-record. The required diameter of a parabolic antenna for reception in the FRG and GDR is about 25 to 30 cm. The further development of antenna technology--flat antennas--that is already apparent today will make possible the reception of these 16 broadcasts even with portable equipment.

For a TV-Sat/TDF 1 successor system with low transmitter power, on the other hand, substantially larger reflector diameters (0.6 to 0.9 meters) would also be required for the reception of the broadcasts. However, it would not thereby be possible, as originally planned, to take advantage of the decisive advantages of the system developed by German industry and substantially promoted by the Federal Ministry for Research and Technology.

A broadcasting-satellite channel with 16 stereo broadcasts would also make it possible for the first time to receive programs in the best quality and in a greater number throughout the FRG and in the GDR, whereas today practically only those very-high frequency programs transmitted from the respective land broadcasting stations for their own areas can be received. A successor satellite system with less transmitter power would greatly limit a technical innovation in the medium that benefits broadcasts and it would block a technology developed by German industry and still unparalleled in the world.

Components for Second Version Ordered

--The time required for system definition as well as development and construction of a broadcasting satellite system with less transmitter power through a European consortium makes a launch prior to 1990 or 1991 appear unrealistic. Until then, only TV-Sat/TDF 1 with the simultaneous usability of four television channels and with no adequate system reserve (stand-by satellite) would be available. The receiving installations purchased for this satellite by subscribers cannot later be used further unless the German and French television administrations allow only receiving reflectors with a diameter of from 1.2 to 1.4 meters. In addition, the costs in the amount of DM150 million to DM200 million would make the later utilization fees per television channel enormously more expensive.

--It is possible that additional frequencies cannot be obtained in the satellite broadcasting band for the transmission of additional programs in the FRG or in France. Neither for France nor for Germany will there be more than five frequencies for the broadcasting satellite. And a change in the internationally contractually determined technical parameters appears to be possible only at a new broadcasting-satellite conference (not before 1994). Individual international attempts at frequency coordination would take a number of years.

--For assumed total costs for a satellite television program of about DM250 million per year, the costs in the magnitude of several million marks for a satellite channel are of no consequence at all. Meanwhile, some details have now

become known on the French plans for the construction and operation of a broadcasting satellite system, plans that cannot be reconciled with the considerations of the commission of experts named at the beginning:

--France has de facto tasked the firm Eurosatellite with the construction of an additional broadcasting satellite (TDF 2). 850 million were cleared under the condition that all components with longer delivery times--especially electronic components--be ordered immediately so that there will be no further delay in the completion of the TDF 2. It is expected that this satellite will be completed in the fall of 1987. Except for insignificant changes, the TDF 2 will be identical to the TDF 1 already under construction.

974

CSO: 5500 2526

VIDEO COMMUNICATIONS CABLING PROJECT RAISES JOB CONFLICTS

Paris LE NOUVEL ECONOMISTE in French 15 Oct 84 p 61

[Article by Anne-Marie Rocco: "Who Will Profit from the Cable?"]

[Text] Will the cabling project create jobs, and where? Now that the PTT [Post, Telephone and Telegraph] plan, confirmed by the government two years ago, is at last entering the operational phase, the debates have resurfaced, more heated than ever.

From a list of more than 150 cities being considered for video-communication--to which ten new requests are added each month--the PTT had already officially chosen six projects: Montpellier, Paris, La Courneuve, L'Isle-d'Abeau, Mantes-la-Jolie and the large urban conglomeration of Boulogne-Severes-Suresnes-Saint Cloud. The final go-ahead has just been given to the two latter cases, with the finalizing of the first contracts for fiber optics installation being awarded to LTT, a branch of CGE [General Electricity Company].

Joy

Professionals in the video industry meeting in Cannes from 13 October for the Vidcom Exhibition cannot help but be overjoyed at this decision. But it is quite another matter for the PTT-Labor Force Union where they are quick to claim misappropriation of a public utility.

"Both at Mantes-la-Jolie and at Boulogne," explains Patrice Sifflet, General Secretary of the Union for Ile-de-France, "the LTT will supply parts and accessories, lay the cable and subscribers' terminals, carry out the connections and will assure the maintenance for two years. In other words, the utility will have nothing to do with the technical aspect of the network set-up process!" An unpleasant surprise, when the cabling project is expected to take over the responsibility for continuing PTT's former telephone accessories program, which now has more than 20 million subscribers.

However, the Administration is in no way renouncing its prerogatives, responds Francois Gerin, Video-communications delegate: "PTT still keeps engineering control in all of the projects. But the first networks will be built by private industry manufacturers, and this will allow the government to approve the systems which are proposed. Later on, the other networks will be delivered in component parts and assembled by PTT."

No doubt. But for those firms selected--LTT, CGCT, associated with Velec and SAT--[companies which supply transmission materials] they are counting heavily on the additional work to be expected from a public works contract. Not only because "turnkey plants" can be exported but also because then there will be more jobs.

For the moment, PTT is committed to ordering 160,000 video connectors from both their suppliers by March 1985. That is a sales revenue of about 600 million francs...but relatively few accompanying jobs: perhaps 100 to 130 in each group. On the other hand, equipment installation would have employed nearly twice as many people, in groups where personnel are continually being laid off: LTT will abolish 1,300 jobs and CGCT one thousand...half of these at its branch, Signalisation, which specializes in telephone installation.

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CSO: 5500/2522

FRANCE, LUXEMBOURG SIGN AGREEMENT ON SATELLITE TELEVISION

Luxembourg LUXEMBURGER WORT in German 27 Oct 84 pp 3-4

[Direct quotations from agreement appear in French in the original text]

[Text] Yesterday morning in Luxembourg French Secretary of State to the Prime Minister for Communications Fillioud, Minister Santer and Minister of Foreign Affairs Poos signed a joint agreement between the two governments which forms the basis for the treaty planned between France and Luxembourg dealing with cooperation in the area of satellite television. According to the text, the Luxembourg-French-Belgian communications firm CLT obtains two channels on the French direct broadcast satellite TDF 1, on which French and German language TV programs are to be broadcast as well as various radio programs. The agreement also contains a clause which is to eliminate competition between commercially financed programs. The wording of this clause signals the end of the former Coronet plans.

From the five-page text made public, it emerges that both governments are convinced that developments in the area of audio visual media should not take place based on uncontrolled flow of opinions, but rather on organized concerted action, which would give opportunities to the respective national industrial firms and the programming companies.

The two governments, it says, are determined to sign a treaty as soon as possible and to present it to their parliaments so that the cooperation of the two countries in the area of DBS television will be regulated. Thereby, as Fillioud stated, a wild competitive struggle between Luxembourg and France and also US-style deregulation of the media market should be avoided.

According to the planned treaty, France will lease two channels on its DBS satellite TDF 1 to CLT for 15 years. CLT will also have the right to use frequencies which were granted to France in Geneva in 1977. In return, Luxembourg states its willingness, in the event that France so requests, to place two of its DBS frequencies at the disposal of its neighboring country. The two governments will sign a concessionary contract with CLT covering copies of programs made by CLT for its German and French programming.

Both countries will establish control organisms which will oversee adherence to the provisions by the concessionaires or by the programming companies which produce the programs. By the following clause the text is to eliminate competition from programs from other satellite systems for 5 years. To quote the agreement: "Wishing to assure the success of the planned operations, the two governments have agreed to combine their efforts so that a favorable economic environment will facilitate the start of the service in a climate propitious to the balanced development of all the media."

"To that end, they agree, for the 5 years following the ratification of the pact, not to authorize, without the consent of the other party, the broadcast by direct broadcast satellite of any other program in French or in German financed primarily by advertising. This clause also applies to any satellite television program in the same languages financed primarily by advertising and capable of being received directly in normal economic and technical conditions by an individual or a household."

For the Coronet program, developed under Minister Pierre Werner, this text signals the definitive end, for Coronet specifically intends to use a satellite which corresponds to the type which France wanted to prevent with this condition: "capable of being received directly." The very possibility of making programs broadcast over Coronet accessible by direct reception was one of the principal arguments of the promoters and also of the previous government. Likewise, it was stressed over and over again that Coronet would in any case have to be able to broadcast programs financed by advertising into German territory in order to be profitable.

Point 4 of the French-Luxembourg agreement states that the programs produced abroad and in Luxembourg will come into final production in Luxembourg and from there will be delivered to the French ground station from which the up-link with the satellite will be established.

Concerning financing, the text stresses the following: "The general principles which serve as the foundation of this agreement have been determined by the two governments: the lease conditions are intended to cover the operational costs and the amortization of the investments corresponding to the conceded channels; they may be changed in the future in such a way as to facilitate the start of operations."

Minister Santer explained that Luxembourg will have to accept financial losses for a while because of the diminished receipts of CLT.

A further point is intended to protect the interests of the French television establishment: "Concerning French language programming, the French and Luxembourg governments have agreed on the general principles contained in the articles and conditions appended to the concessionary agreement. These obligations deal primarily with the programming of cinematographic and fictional works and the collection of advertising resources with a view to maintaining the balances of this market. They take into account at the same time the

constraints which bear on the television services broadcast in France and also the necessity for certain adjustments during the initial period."

In the final point, France states its willingness to include Luxembourg in its satellite plans over the long term.

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CSO: 5500/2527

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